(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 15 July 2004 (15.07,2004)

PCT

(10) International Publication Number WO 2004/059969 A3

(51) International Patent Classification7:

H04N 5/76

(21) International Application Number:

PCT/IB2003/006156

(22) International Filing Date:

23 December 2003 (23.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02159856.8

27 December 2002 (27.12.2002) CN

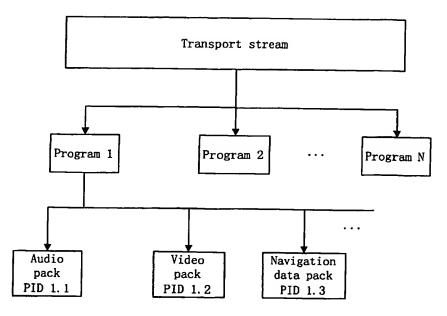
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KELLY, Declan [IE/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN).

WANG, Bei [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN). PENG, Yang [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN). HE, Dahua [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN).

- (74) Common Representative: KONINKLIJKE PHILIPS ELECTRONICS N.V.; c/o VAN DER VEER, Johannis, L., Prof. Holstlaan, 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: DIGITAL BROADCAST METHOD AND SYSTEM FOR SUPPORTING DVD RECORDING AND RELEVANT RECEIVING AND RECORDING METHOD AND DEVICE



(57) Abstract: A digital broadcast method and system for supporting DVD recording, and relevant receiving and recording method and device are disclosed. A navigation data used for forming a DVD program is loaded into a private data stream of a TS transmitted by a broadcast system to let the system of the present invention be compatible with existing digital broadcast systems. A receiving end receives the navigation data when receiving audio data and video data. Therefore, it is possible to record the program in a DVD format so that a user enjoys the same feature-rich scanning function as issued DVSDs when replaying programs.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

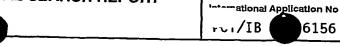
Published:

with international search report

(88) Date of publication of the international search report: 2 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT



A. CLASSIF	ICATION O	F SUBJEC	TMATTER
IPC 7	H04N5	/76	

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 893 898 A (MATSUSHITA ELECTRIC IND CO LTD) 27 January 1999 (1999-01-27) column 1, line 5 - column 3, line 53 column 4, line 37 - column 7, line 19 column 8, line 32 - column 9, line 17 column 11, line 38 - column 12, line 54 column 14, line 15 - column 15, line 28; figures 1,4-6,8,11	1-20
1		1

Y Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.		
Special categories of cited documents:			
 A document defining the general state of the art which is not considered to be of particular relevance E earlier document but published on or after the International filing date L document which may throw doubles on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O document referring to an oral disclosure, use, exhibition or other means P document published prior to the international filing date but later than the priority date claimed 	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family 		
Date of the actual completion of the international search	Date of mailing of the international search report		
9 September 2004	16/09/2004		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	Authorized officer		
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Oberreich, C		

INTERNATIONAL SEARCH REPORT

International Application No

/IB 00006156

Category® Citation of document, with indication, where appropriate, of the relevant passages X GB 2 351 888 A (SAMSUNG ELECTRONICS COLTD) 10 January 2001 (2001–01–10) page 1, lines 4–10 page 2, line 26 – page 3, line 6 page 5, lines 21–25 page 6, line 26 – page 7, line 8 page 8, line 14 – page 9, line 6 page 10, lines 9–18 page 10, lines 9–18 page 10, line 28 – page 16, line 16; figure 2 A ISO/IEC CD13818–1 (MPEG 2 PART 1) ED – INTERNATIONAL ORGANIZATION FOR STANDARDIZATION = ORGANISATION INTERNATIONALE DE NORMALISAT: "PROGRAM SPECIFIC INFORMATION" INFORMATION TECHNOLOGY – GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION. PART 1: SYSTEMS. DRAFT INTERNATIONAL STANDARD ISO/IEC DIS 13818–1, GENEVA, ISO, CH, 1994, pages 36–45,106, XP002060689 section 2.4.4, Annex H.0, figures F–6 A GB 2 350 514 A (SAMSUNG ELECTRONICS COLTD) 29 November 2000 (2000–11–29) page 3, line 32 – page 5, line 8; figure 1 page 6, lines 28–33	1-20 2,6,9,13
LTD) 10 January 2001 (2001-01-10) page 1, lines 4-10 page 2, line 26 - page 3, line 6 page 5, lines 21-25 page 6, line 26 - page 7, line 8 page 8, line 14 - page 9, line 6 page 10, lines 9-18 page 10, line 28 - page 11, line 17 page 14, line 10 - page 16, line 16; figure 2 A ISO/IEC CD13818-1 (MPEG 2 PART 1) ED - INTERNATIONAL ORGANIZATION FOR STANDARDIZATION = ORGANISATION INTERNATIONALE DE NORMALISAT: "PROGRAM SPECIFIC INFORMATION" INFORMATION TECHNOLOGY - GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION. PART 1: SYSTEMS. DRAFT INTERNATIONAL STANDARD ISO/IEC DIS 13818-1, GENEVA, ISO, CH, 1994, pages 36-45,106, XP002060689 section 2.4.4, Annex H.O, figures F-6 A GB 2 350 514 A (SAMSUNG ELECTRONICS CO LTD) 29 November 2000 (2000-11-29) page 3, line 32 - page 5, line 8; figure 1 page 6, lines 28-33	
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION = ORGANISATION INTERNATIONALE DE NORMALISAT: "PROGRAM SPECIFIC INFORMATION" INFORMATION TECHNOLOGY - GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION. PART 1: SYSTEMS. DRAFT INTERNATIONAL STANDARD ISO/IEC DIS 13818-1, GENEVA, ISO, CH, 1994, pages 36-45,106, XP002060689 section 2.4.4, Annex H.O, figures F-6 GB 2 350 514 A (SAMSUNG ELECTRONICS CO LTD) 29 November 2000 (2000-11-29) page 3, line 32 - page 5, line 8; figure 1 page 6, lines 28-33	2,6,9,13
LTD) 29 November 2000 (2000-11-29) page 3, line 32 - page 5, line 8; figure 1 page 6, lines 28-33	
page 10, line 32 - page 20, line 28	1,5,10, 20
A EP 0 863 669 A (MATSUSHITA ELECTRIC IND CO LTD) 9 September 1998 (1998-09-09) the whole document	

INTERNATIONAL SEARCH REPORT

Information or natent family members

International Application No
Inc. / IB 06156

Publication date

Patent document		raplication		Data at to will :	
cited in search report		date		Patent family member(s)	Publication . date
EP 0893898	A	27-01-1999	JP	11041290 A	12-02-1999
			JP	11041318 A	12-02-1999
•			CN	1210411 A	10-03-1999
			EP	0893898 A2	27-01-1999
~~~~~~~			US	6556546 B1	29-04-2003
GB 2351888	Α	10-01-2001	KR	2000004855 A	25-01-2000
			CN	1441572 A	10-09-2003
			CN	1249594 A ,B	05-04-2000
			DE	19927711 A1	05-01-2000
			GB	2341298 A ,B	08-03-2000
			ID	23261 A	05-04-2000
			JP	3357011 B2	16-12-2002
			JР	2000105967 A	11-04-2000
			JP	2003116088 A	18-04-2003
			บร	6504996 B1	07-01-2003
GB 2350514	Α	29-11-2000	KR	2000059380 A	05-10-2000
			CN	1266333 A	13-09-2000
			DE	10010490 A1	14-09-2000
			JP	3302970 B2	15-07-2002
			JP	2000261802 A	22-09-2000
			US	6724981 B1	20-04-2004
EP 0863669	Α	09-09-1998	DE	69708042 D1	13-12-2001
			DE	69708042 T2	14-03-2002
			EP	0863669 A1	09-09-1998
			บร	6292226 B1	18-09-2001
			CN	1206533 A ,C	27-01-1999
			WO	9809437 A1	05-03-1998

## CORRECTED VERSION

# (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 15 July 2004 (15.07.2004)

**PCT** 

(10) International Publication Number WO 2004/059969 A3

- (51) International Patent Classification7:
- H04N 5/76
- (21) International Application Number:

PCT/IB2003/006156

(22) International Filing Date:

23 December 2003 (23.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02159856.8

27 December 2002 (27.12.2002) CN

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KELLY, Declan [IE/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN). WANG, Bei [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN). PENG, Yang [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN). HE, Dahua [CN/CN]; Philips Electronics China, 21/F Kerry Office Building 218 Tian Mu Xi Road, 200070 Shanghai (CN).

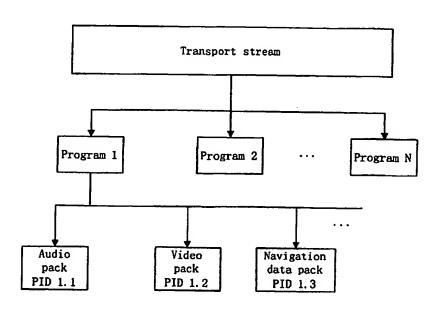
- (74) Common Representative: KONINKLIJKE PHILIPS ELECTRONICS N.V.; c/o VAN DER VEER, Johannis, L., Prof. Holstlaan, 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,

[Continued on next page]

(54) Title: DIGITAL BROADCAST METHOD AND SYSTEM FOR SUPPORTING DVD RECORDING AND RELEVANT RE-CEIVING AND RECORDING METHOD AND DEVICE



(57) Abstract: A digital broadcast method and system for supporting DVD recording, and relevant receiving and recording method and device are disclosed. A navigation data used for forming a DVD program is loaded into a private data stream of a TS transmitted by a broadcast system to let the system of the present invention be compatible with existing digital broadcast systems. A receiving end receives the navigation data when receiving audio data and video data. Therefore, it is possible to record the program in a DVD format so that a user enjoys the same feature-rich scanning function as issued DVSDs when replaying programs.

WO 2004/059969 A3 |||

RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

#### Published:

with international search report

- (88) Date of publication of the international search report: 2 December 2004
- (48) Date of publication of this corrected version:

17 March 2005

(15) Information about Correction: see PCT Gazette No. 11/2005 of 17 March 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.